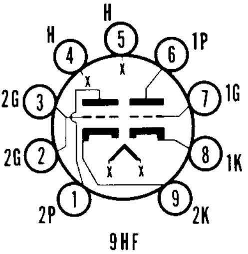


SYLVANIA TYPES 6EW7 10EW7



DISSIMILAR DUO TRIODE

The 9-T9 design utilized a T-9 (1⅛″ Dia.) bulb based to fit a standard 9-pin miniature socket. Advantages of the 9-T9 include an increase in the heat dissipation safety margin, as compared to 9-pin miniature tubes employing T-6½ (13/16″ Dia.) bulbs.

MECHANICAL DATA

Bulb	Special, T-9
Base	9-Pin, same as E9-1, except bulb diameter
Outline	See Drawing
Basing	9HF
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6EW7	10EW7	
Heater Voltage	6.3[1]	9.7	Volts
Heater Current	900	600[2]	Ma
Heater Warm-up Time[3]		11	Seconds
Maximum Heater Voltage Range[4]	5.7-6.9	—	Volts
Maximum Heater Current Range[4]	—	560-640	Ma
Heater-Cathode Voltage (Design Maximum Values)			
Heater Negative with Respect to Cathode			
Total D C and Peak	200	200	Volts Max.
Heater Positive with Respect to Cathode			
D C	100	100	Volts Max.
Total D C and Peak	200	200	Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section No. 1	Section No. 2	
Grid to Plate	4.2	9.0	μμf
Input: g (h+k)	2.2	7.0	μμf
Output: p to (h+k)	0.4	1.2	μμf

RATINGS (Design Maximum Values)

Vertical Deflection Oscillator and Amplifier[5]

	Section[7] No. 1 Oscillator	Section[7] No. 2 Amplifier	
Plate Voltage	330	330	Volts Max.
Peak Positive Pulse Plate Voltage	—	1500	Volts Max.
Peak Negative Pulse Grid Voltage	400	250	Volts Max.
Plate Dissipation[6]	1.5	10	Watts Max.
Average Cathode Current	22	50	Ma Max.
Peak Cathode Current	77	175	Ma Max.
Grid Circuit Resistance			
Self Bias	2.2	2.2	Megohms

AVERAGE CHARACTERISTICS

	Section[7] No. 1	Section[7] No. 2	
Plate Voltage	250	150	Volts
Grid No. 1 Voltage	−11	−17.5	Volts
Plate Current	5.5	45	Ma
Transconductance	2000	7500	μmhos
Amplification Factor	17.5	6.0	
Plate Resistance (approx.)	8750	800	Ohms
Ec for Ib = 10 μa (approx.)	−20	—	Volts
Ec for Ib = 100 μa (approx.)	—	−40	Volts
Ib at Ec = −25 Vdc	—	8	Ma
Ib with Eb = 60 V and Ec = 0 V (Instantaneous Values)	—	95	Ma

NOTES:

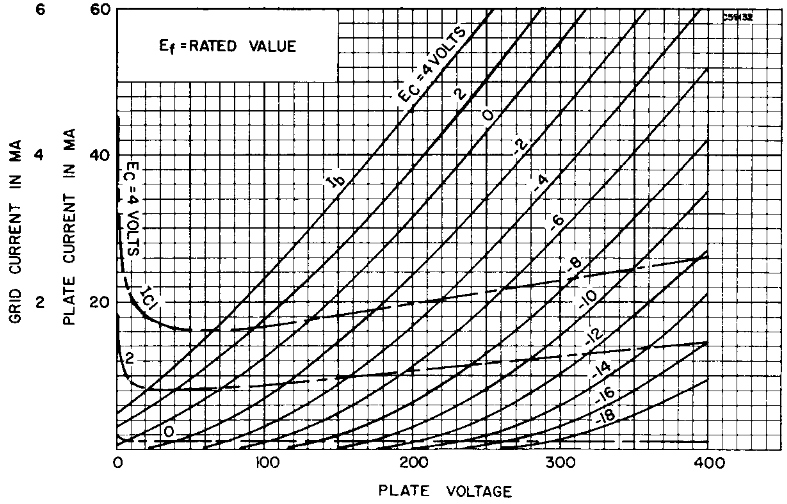
1. For parallel heater operation, equipment should be so designed so that at normal supply voltage bogey tubes will operate at this value of heater voltage.
2. For series heater operation, equipment should be so designed so that at normal supply voltage bogey tubes will operate at this value of heater current.
3. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.

4. Design-Maximum Ratings.
5. For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.
6. In stages operating with grid leak bias, an adequate bias resistor or other suitable means is required to protect the tube in the absence of excitation.
7. Section No. 1 connects to Pins 6, 7 and 8. Section No. 2 connects to Pins 1, 2, 3 and 9.

APPLICATION

The Sylvania Types 6EW7 and 10EW7 are dissimilar-section double triodes featuring the 9-T9 bulb and pin configuration. The 6EW7 and 10EW7 are intended to serve the combined functions of vertical deflection oscillator and amplifier.

AVERAGE PLATE CHARACTERISTICS (Section No.1)



AVERAGE TRANSFER CHARACTERISTICS (Section No.2)

